

NEW SPECIES OF BARK BEETLES (COLEOPTERA:
SCOLYTIDAE), MOSTLY MEXICAN. PART IV

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In this paper three new species of scolytid beetles are described as new, two in the genus *Cactopinus* Schwarz, from Mexico, and one in *Pseudothysanoes* Blackman, from Florida. The two former species were collected by the writer while with the 1953 expedition of the Francis Huntington Snow Entomological Museum (University of Kansas, Lawrence), the latter species was received from Dr. A. N. Tissot (University of Florida, Gainesville) through the U. S. National Museum.

The genus *Cactopinus* is of special interest because the peculiar modification of the male frons, along with other characters, has led various authors (Chamberlin, 1939, the Bark and Timber Beetles of North America, p. 242) to elevate the group to the rank of subfamily. However, since that action was taken, many new species and genera have been added to the family; and it is now possible to assign *Cactopinus* to the tribe Micracini, evidently near the genera *Phloeoclyptus* Wood and *Stenoclyptus* Blackman.

Cactopinus cactophthorus, n. sp.

Figs. 1, 4, 5, 6

This species differs from previously described species by the presence of a sharp tubercle at lateral margin of frons between antennal insertion and eye, by the much smaller posterior elevation of pronotum, and by the smaller size.

Male: Length 1.37 mm., 2.41 times as long as wide; color black.

Frons with a deep, subconcave transverse impression extending from vertex to epistoma, the upper margin abrupt but not sharp; epistoma bearing a pair of contiguous hornlike processes, about 0.24 mm. long (variable in the series), as in other species of the genus, with a pair of conspicuous bristles near tip; vestiture limited to an epistomal brush largely concealing mandibles, rather long hairlike setae ornamenting the hornlike processes, and a row of setae along upper margin of concavity. Eye short, ovate; finely granulate. Antennal scape short, bearing several setae; funicle five-segmented, club subcircular, with three transverse sutures indicated by setae (Fig. 4).

Pronotum about 1.1 times as long as wide; widest near middle, posterior angles rather broadly rounded, sides weakly arcuate; anterior margin rather narrowly rounded and armed by about four small teeth; the indefinite summit just in front of posterior margin, the posterior elevation not extending beyond the margin; asperities small and blunt, sharper and more abundant in anterior area than in previously described species; vestiture consisting of a few scattered, slender hairs.

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Elytra 1.37 times as long as wide, about 1.3 times as long as pronotum; sides subparallel on anterior three-fourths, rather broadly rounded behind; striae not impressed except the first near declivity, punctures large, deep, close; interstriae about one-half as wide as striae, finely punctured, irregular, one, two, and three finely, uniseriately granulate, one, five, and seven evidently also bearing minute granules (granules on two and three show on Fig. 1). Declivity steep, strongly sulcate between third interstriae, as wide as, and much deeper than in *koebeleri*; first interstriae weakly elevated, bearing a row of fine granules; first striae impressed, deeply punctured, others obscure; lateral convexities rather high, with fine granules on all of the interstriae but the tenth, those of the second somewhat larger, interstriae two and three both forming the crest of the elevations. Vestiture consisting mostly of small, short, yellow hairs, and a few longer yellow bristles along sides.

Female: Frons less strongly impressed, epistomal processes absent, and declivity less strongly sulcate, otherwise similar to male.

Type Locality: Ten miles southeast of Tehuitzingo, Puebla, Mexico.

Host: Giant Cactus.

Type Material: Male holotype, female allotype, and 139 paratypes were collected July 3, 1953, by the writer, from just beneath the outer surface of the drier parts of a standing, treelike, dying, giant cactus having eight longitudinal ridges on each branch. The holotype, allotype and some paratypes are in the Snow Entomological Collections, other paratypes are in the collection of the writer.

Definite gallery patterns could not be determined. They were, however, filled with frass even where the beetles were working; the presence of a specimen usually being determined by the movement of this material. The beetles moved through their frass filled tunnels with remarkable speed, progressing with the leading parts of the head near the bottom of the tunnel, the frass then being forced up over the back and to the sides of the specimen, leaving a firm footing beneath. The frontal horn of the male appeared to serve as a tactile organ enabling him to move with greater speed and efficiency of movement than the females. The stout setae on the male horn and on other parts of the body were not bent by the frass in the tunnels as would be the case with the usual types of scolytid setae. These observations were made in the laboratory at magnifications up to 80 diameters.

Cactopinus spinatus, n. sp.

Figs. 2, 3, 7

Perhaps more closely allied to the foregoing species than to others of the genus. Distinguished from all others in the genus by the rather long tuberculate lateral processes on frons, by the pair of median epistomal tubercles in the male, by the alternately tuberculate interstriae, by the much deeper and wider declivital excavation and the much larger declivital teeth.

Male: Length 1.6-1.7 mm., 2.52 times as long as wide; color black.

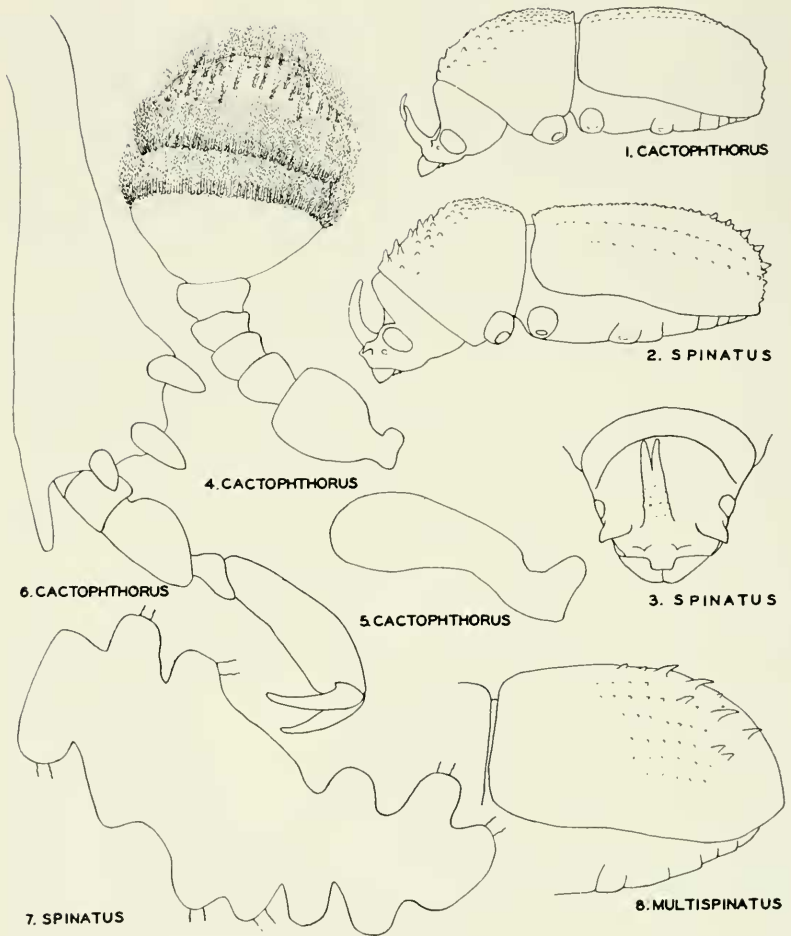
Frons (Fig. 3) with a deep, subconcave impression extending from vertex to epistomal margin; the arcuate upper margin sharply elevated almost from eye to eye, concavity with rather large, shallow, inconspicuous punctures of moderate abundance on lower half, smooth, but not shining above; a rather short, broad, median epistomal process largely concealed by a rather narrow epistomal brush, and just above ends of brush a pair of sharp, broad tubercles, and above and between these tubercles the large, curved epistomal horn; the halves of epistomal horn fused except at tip, finely tuberculate, and clothed with a few short hairs; a large elevated, transverse process extending laterally from just below the horn to just above the antennal insertion; vestiture consisting of the epistomal brush and a row of sparse, short, yellow hair along upper margin of concavity. Eye short, oval, about one and one-half times as long as wide. Antennal scape perhaps a little longer than other species of genus and bearing several long setae; club small, oval, not strongly compressed.

Pronotum about as wide as long, subcircular in outline; anterior margin rather narrowly rounded and armed by about six rather large submarginal teeth; asperities rather large and sharp anteriorly, summit just in front of posterior margin, posterior elevation poorly developed, not reaching margin; surface finely granulate, with a few larger granules laterally in posterior one-fourth, posteromedian asperities slender, higher than wide, abundant; vestiture consisting of very long, coarse, curved hair.

Elytra 1.57 times as long as wide; sides subparallel on basal three-fourth, almost truncate behind; striae not impressed except first posteriorly, the punctures rather large, deep, close; interstriae about one-half as wide as striae, the first, third and fifth distinctly elevated from just behind scutellum to apex; interstriae one, three, five, seven and posterior one-third of two uniseriably tuberculate, tubercles isolated, high, rather sharp (only three, five and seven show on Fig. 2, except for the large declivital teeth of two). Declivity very strongly, broadly sulcate, very steep; suture slightly elevated lateral elevations high, the crest armed on inner margin of summit by five large, sharply pointed teeth from the second interstriae, and the outer margin by several smaller teeth from the third interstriae; declivital face finely granulate and irregularly punctured (surface obscured). Vestiture consisting of short, erect, yellow striae and interstitial hairs, and very long, coarse bristles on interstriae three, five, seven, and along sides; vestiture on declivity consisting of a single row of short setae along suture. First and second abdominal segments each almost as long as three, four and five combined.

Female: Frons less strongly impressed, epistomal horn absent, other frontal tubercles present, but smaller; declivity with the teeth of second interstriae usually reduced in number.

Type Locality: One mile southeast of Camaron, Oaxaca, Mexico.



Figs. 1, 4-6. *Cactopinus cactophthorus*: 1, lateral aspect of male; 4, anterior face of antennal club and funicle of male; 5, antennal scape of male; 6, posterior face of fore tibiae and tarsus of male (same scale as 4 and 5).

Figs. 2, 3, 7. *Cactopinus spinatus*: 2, lateral aspect of male (same scale as 1); 3, cephalic aspect of head of male; 7, parental gallery with beginnings of seven larval galleries indicated.

Fig. 8. *Pseudothysanoes multispinatus*, lateral aspect of male elytra (same scale as 1 and 2).

Host: Unknown tree.

Type Material: Male holotype, female allotype, and 49 paratypes were collected July 7, 1953, by the author, from the cambium region of dying twigs of a large nut bearing tree that had pinnately compound leaves. The holotype, allotype and some paratypes are in

the Snow Entomological Collections, other paratypes are in the collection of the writer.

The beetles appeared to be monogamous. They constructed short, broad transverse galleries in the cambium region about 5 to 8 mm. long and about 2 mm. wide (Fig. 7). The walls of these frass filled egg chambers were completely lined by large egg niches wide enough and deep enough to accommodate the head and thorax of the female parent. One larval tunnel arose from each niche and ran parallel to the grain of the wood, engraving both wood and bark, and were from 2 to 5 cm. in length. The pupal chambers were somewhat enlarged and engraved the wood more deeply; these were followed by large, irregular feeding tunnels.

Pseudothysanoes multispinatus, n. sp.

Fig. 8

This species is intermediate between *bartoni* Bruck, from California, and *spinatus* Wood, from Mexico. In addition to differences in male declivital armature, both sexes of this species are larger, more coarsely sculptured on head, pronotum and elytra, and have the frons much more strongly impressed than in either *bartoni* or *spinatus*.

Male: Length 1.3 mm., 2.2 times as long as wide; body color brown.

Frons subconcave almost from eye to eye from epistomal margin to well above eyes, an additional subfoveate, smooth median sulcus at bottom of concavity; surface covered by rather coarse craterlike granulate punctures; vestiture consisting of sparse, short, coarse hair. Eye ovate, entire; finely granulate. Antennal club ovate; sutures scarcely visible, strongly arcuate, the first almost one-half the length of the club from the base, the second more than three-fourths the length from the base.

Pronotum 0.92 times as long as wide; widest near base, sides arcuately converging toward the rather narrowly rounded anterior margin; anterior margin armed by four rather large closely set teeth; general surface smooth and moderately shining with rather close, coarse, low craterlike granulate punctures; vestiture consisting of short, slender scales and hairs, longer near summit.

Elytra 1.4 times as long as wide; sides straight and subparallel on basal two-thirds, rather broadly rounded behind; striae slightly impressed toward declivity, the punctures rather large, very close, deep; interstriae about as wide as striae, the punctures fine and granulate, some granules forming sharply pointed spines near upper margin of declivity. Declivity (Fig. 8) beginning near middle of elytra, moderately steep; striae and interstriae slightly narrower than on disc, and except for the spines, similarly sculptured; interspace one armed by two long slender spines at upper margin of declivity separated by a distance slightly greater than the length of either spine, one or two smaller spines above and below the large ones; interspace

three with two larger, slender spines, the first just below level of second spine of interspace one, and almost similarly spaced, and with one small spine above the first; interspace five with two rather closely set smaller slender spines, both located at a level between the spines of interspace three. Vestiture scalelike, shorter and about twice as long as wide on disc; longer and about six times as long as wide on declivity.

Female: Similar to male except: very slightly larger, frons rather strongly concave, sutures of antennal club more clearly evident; teeth on anterior margin of pronotum scarcely evident; elytra more finely sculptured; and declivity shorter, more abrupt, and devoid of spines.

Type Locality: Gainesville, Florida.

Host: *Tilia cienoserrata*.

Type Material: The male holotype, female allotype and 41 paratypes were collected at the type locality on January 17, 1939, collection number 8870, by A. N. Tissot. The holotype, allotype and some paratypes are in the U.S. National Museum, other paratypes are in the collections of Dr. Tissot and the writer.